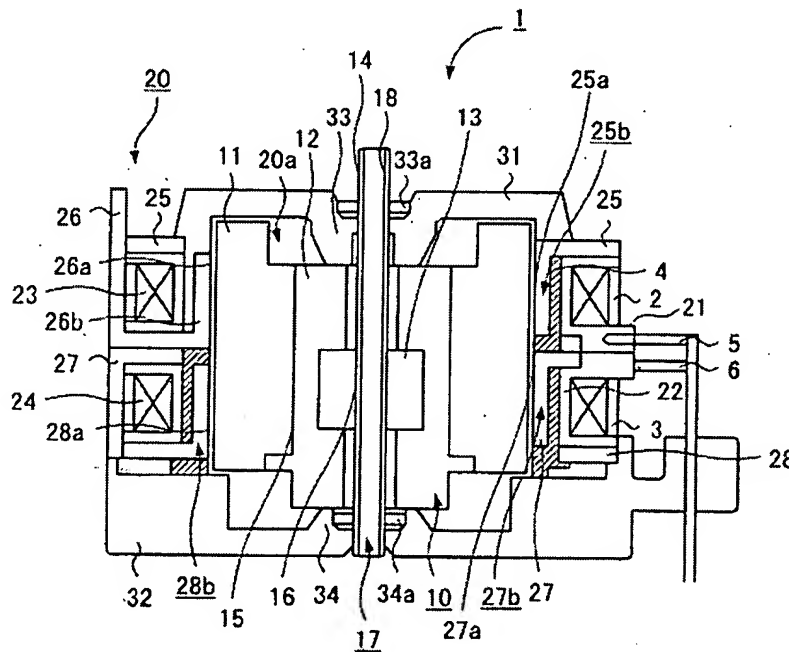


Embodiments in accordance with the present invention relate to motors, and in particular to motors for use in display panels. Figure 1 (reproduced below) of the instant application shows one embodiment of such a motor design:



The projections 33 and 34 have respective bearings 33a and 34a to rotatably support the rotary shaft 14. (Emphasis added; page 7, lines 14-18).

Independent claims 1, 10, and 11 have accordingly been amended to recite as follows:

1. A motor for a meter comprising:
 - ... a front plate arranged at an upper end of the stator in an axial direction, the front plate is made of a first resin material and has a projection at its center to prevent axial play of the rotor assembly; and

a rear plate arranged at a lower end of the stator in the axial direction, the rear plate is made of a second resin material and has a projection at its center to prevent axial play of the rotor assembly;

... wherein the projections of the front and rear plates have respective bearings to rotatably support the rotary shaft. (Emphasis added)

10. A panel meter comprising:

... a motor which is arranged at one side surface of the display board, and includes: ... a front plate and a rear plate, the rotary shaft having a first end passing through the opening of the display board so as to protrude from the other side surface of the display board, the rotary shaft is hollow-cylindrical with open ends, an inner wall of the rotary shaft is coated with a light-reflecting layer, the rotary shaft allowing light to pass therethrough in an axial direction, the front plate being arranged at an upper end of the stator in the axial direction, the front plate is made of a first resin material and has a projection at its center to prevent axial play of the rotor assembly, the rear plate being arranged at a lower end of the stator in the axial direction, the rear plate is made of a second resin material and has a projection at its center to prevent axial play of the rotor assembly;

... wherein the protections of the front and rear plates have respective bearings to rotatably support the rotary shaft. (Emphasis added)

11. A motor for a meter comprising:

... a front plate arranged at an upper end of the stator in an axial direction, the front plate is made of a first resin material and has a projection at its center to prevent axial play the rotor

a rear plate arranged at a lower end of the stator in the axial direction, the rear plate is made of a second resin material and has a projection at its center to prevent axial play of the rotor;

wherein the stator is integrally constituted by molding resin material for positioning and fixing each individual part of the stator,

wherein the projections of the front and rear plates have respective bearings to rotatably support the rotary shaft. (Emphasis added)

The Examiner has rejected the pending claims under 35 U.S.C. 103 as obvious, based upon U.S. patent no. 6,211,585 to Sato et al. ("the Sato patent") taken in combination with a number of other references. These claim rejections are overcome as follows.

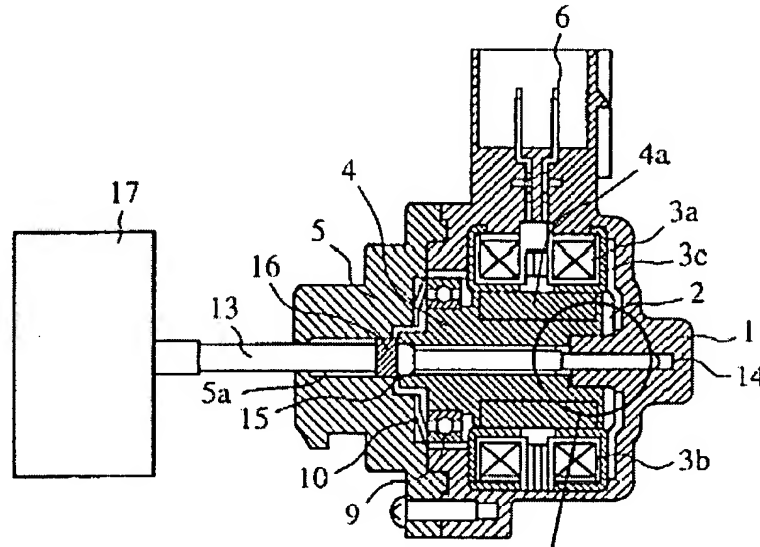
As a threshold matter, the Examiner is reminded that in order to establish a prima facie case of obviousness, "the prior art reference (or references when combined) must teach or suggest all the claim limitations." MPEP 2143. Here, none of the references relied upon by the Examiner teach, or even suggest, the claimed configuration. For example, while the Sato patent

does describe a motor design, the Sato patent fails to disclose front and rear plates formed from resin material and having projections with bearings.

This absent teaching is not supplied by any of the other references also relied upon by the Examiner. For example, the Examiner has combined the Sato patent with German patent no. 19538547 to Noll et al. ("the Noll patent"), U.S. patent no. 6,144,120 to Doi et al. ("the Doi patent"), and U.S. patent no. 3,872,691 ("the Hildebrandt patent"). None of these references teach, or even suggest, the claimed configuration.

For example, prior to its amendment by the instant response, claim 2 had recited the front and end plate elements arranged as bearings for supporting a rotary shaft. In the latest office action, this claim 2 was rejected based upon the Doi patent.

Review of the Doi patent, however, reveals that this reference fails to teach, or even suggest, the elements of the pending claims. Specifically, Figure 1A of the Doi patent is reproduced below:



This Figure 1A depicts only a boss (5) secured to the housing main body (1). It does not describe separate front and rear plates made of resin and including projections having bearings, as is now recited by the pending claims.

Regarding the Noll patent relied upon by the Examiner, this reference teaches a rotary shaft having an inner wall coated with a light reflecting layer. This patent contains no apparent

teaching regarding the use of bearings arranged on projections of front and rear plates to rotatably support the shaft. In fact, the Noll patent discloses a shaft drive system only generally, such that the drive system cannot even be identified as a motor. Accordingly, the shaft drive system of the Noll patent, which has no component for rotating the shaft, is a different device from the motor of the Sato patent, which has a rotor.

As for the Hildebrandt patent, this reference is relied upon by the Examiner in the latest office action only to show a shaft made from metal for the purpose of reducing cost. The Hildebrandt patent says nothing regarding the use of front and rear plates made of resin and featuring projections having bearings for rotatably supporting a shaft.

Because the references relied upon by the Examiner, even when combined, fail to teach each and every element of the pending claims, it is respectfully asserted that these claims cannot be considered obvious. Continued maintenance of the obviousness claim rejections is improper, and these claim rejections should be withdrawn.

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested. If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,



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